PRACE POGLĄDOWE
położnictwo

Multiaxial changes in pregnancy: mental health – a review of the literature

Wielowymiarowe zmiany w okresie ciąży. Perspektywa zdrowia psychicznego – przegląd badań

Łukasz Müldner-Nieckowski, Katarzyna Cyranka, Bogna Smiatek-Mazgaj, Michał Mielimąka, Jerzy A. Sobański, Krzysztof Rutkowski

Department of Psychotherapy, Jagiellonian University Medical College, Krakow, Poland

Abstract

Pregnancy constitutes not only a challenge for the body of the woman, but also a developmental and psychological task for the mother-to-be, her partner and the entire family. Considerable amount of research has been published on the subject of the puerperal period and treatment options of various disorders emerging after pregnancy. However, data on psychiatric disorders and their treatment during that period, although available, remain insufficient.

The paper reviews the literature on mental disorders occurring in pregnancy, taking into account the overall emotional situation of the pregnant woman.

Key words: **mental disorders** / **pregnancy** / **mental health** /

Streszczenie

Ciąża stanowi wyzwanie nie tylko dla organizmu kobiety – jest także, w szerszym znaczeniu, rozwojowym i psychologicznym zadaniem dla przyszłej matki, jej partnera i całej rodziny. W literaturze przedmiotu znaleźć można sporo badań poświęconych leczeniu zaburzeń psychicznych pojawiających się w okresie poporodowym. Istnieje natomiast deficyt w zakresie opracowań odnoszących się do zaburzeń i terapii kobiet w ciąży.

Poniższy artykuł przedstawia przegląd literatury dotyczącej zaburzeń psychicznych w okresie prenatalnym, z uwzględnieniem ogólnej sytuacji emocjonalnej przyszłej matki.

Słowa kluczowe: **zaburzenia psychiczne** / **ciąża** / **zdrowie psychiczne** /

Adres do korespondencji:
Department of Psychotherapy Jagiellonian University Medical College
Łukasz Müldner-Nieckowski
Lenartowicza Street 14, 31-138 Krakow, Poland
Tel. +12 633 12 03, Fax +12 633 38 69
e-mail: l.muldner@gmail.com

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Introduction

The literature offers a substantial number of articles on psychiatric disorders that begin in the postpartum period, which include treatment options and their effectiveness, and emphasizes that psycho-social interventions during pregnancy are crucial to reduce or even prevent the development of postnatal disorders [1, 2]. The goal of this paper is to review the literature reports on mental disorders co-occurring with pregnancy.

Pregnancy and psychological functioning of women – adaptation changes

Pregnancy, regardless of whether it was planned or unexpected, evokes a lot of conflicting feelings in women [3]. This is a similar kind of ambivalence which appears in response to any major change in life, frequently associated with psychiatric symptoms and syndrome incidence [4]. Therefore, pregnancy can be considered as a stressful event which requires adaptation. The Richard Lazarus' theory of stress may be applied to understand reactions occurring in that situation. According to that concept, stress depends on how a person evaluates a given event and his/her ability to cope with it. Thus, pregnancy can be, as a stressful event, perceived by a woman as harm, threat, loss, or challenge. It can be especially difficult for the pregnant women to feel dependent on other people and institutions. Thus, mothers-to-be may perceive themselves as somehow 'disabled', which is sometimes exacerbated by the way they are treated by the medical personnel [5].

Preparation for motherhood

Preparation for motherhood to a great extent depends on the following factors: is it the first or subsequent pregnancy, whether the pregnancy was planned, the outcome of previous pregnancies, and the relationship with the father of the child. Preparing for maternity includes family adaptation (in case of the first pregnancy these changes include both the procreative and generational family), as well as professional, interpersonal, psychological, and appearance changes [5]. Stress and uncertainty occur in all women but primiparas, especially those who had not planned the pregnancy and are not in a stable relationship, are subjected to a considerably greater level of distress, which also makes it harder for them to find themselves in the role of a mother.

Currently, a number of approaches that help women in dealing with these tasks is being established, especially in the field of humanistic psychology. This trend includes antenatal psychology and maternology, which emphasizes the role of working with the body and relaxation in order to achieve greater self-awareness and reduce tension [6]. Moreover, a lot depends on appropriate medical care and providing pregnant women with reliable information about the changes they will experience [7-8].

Partner relationship

Pregnancy heralds a period of changes in the relationship between partners. Mood and self-esteem of a pregnant woman, as well as satisfaction from having a child, depend on the strength of the partnership. If the attitudes of the partners towards pregnancy differ significantly, it can result in negativity on the part of the woman. It happens quite often, as pregnant women are much more focused on their children than on their partners, so they may feel misunderstood and may start to perceive their partners as intrusive, childish and uninvolved [7].

Research also indicates a strong correlation between the first pregnancy and possible disturbances in the marital relationships. As many as one in three pairs expecting their first child experience significant communication problems. They may be manifested by changes in the conjugal intimacy, for example [9, 10].

If a marriage was contracted because of the pregnancy, it is also under a greater risk of collapse than if its basis were love, partner's character or a need to have somebody close [10].

Sex life

Sexuality in pregnancy has remained a taboo subject for a long time, as well as the sex life of the patients for many doctors, resulting in many myths and stereotypes connected with this topic [11]. However, studies indicate that engaging in sexual interactions during pregnancy and the postpartum period has a positive effect on the sexual health and well-being of the couple and leads to greater intimacy in the relationship [12].

If the course of pregnancy is undisturbed, neither intercourse nor orgasm should have a negative impact on the health of the child. However, appropriate sexual positions should be used in the second and the third trimester in order to avoid constriction of the abdomen of the woman [7, 13]. Sexual problems persist after birth in approximately 86% of the couples [12]. They may be connected with, inter alia, the women's feeling of being unattractive, but also with her preoccupation with the newborn, which the partner may perceive as rejection.

Emotional life

Individual attitude towards motherhood and the attendant consequences influence the emotionality of a pregnant woman, both its type and intensity [7]. Each trimester is characterized by different intensity of emotions. The first trimester is accompanied by the greatest instability of the mood, with joy of becoming a mother and planning for the future motherhood, but also fear and anxiety connected with the possibility of a miscarriage or physical malaise. In the second trimester emotions are more stable. A woman can feel fetal movements and listen to the rhythm of the fetal heart, which is usually a source of positive feelings. Physiological symptoms subside and the abdomen is not large enough to hinder performance. The third trimester heralds the return of negative emotional attitudes related to fear of childbirth (pain, complications) and physical changes that are the cause of many ailments (shortness of breath, headache, increased fatigue). All these may result in increased excitability, irritability and mood swings [5, 7].

Depression and depressive reactions

Depression during pregnancy has begun to be recognized as a factor that may negatively affect the pregnancy outcome. Depression has also been linked to known risk factors for adverse pregnancy outcomes such as smoking, substance abuse, hypertension, preeclampsia, and gestational diabetes. Recent estimates of the prevalence of major depression during pregnancy have shown that from 8.3% to 12.7% of women (in US) experience this condition. Moreover, numerous community-based studies have indicated that poor urban women from minority backgrounds are at least twice as likely to meet diagnostic criteria for major and minor depression during pregnancy and the postpartum period as

compared to their middle-class peers (20%–25% vs. 9%–13%, respectively) [14].

These findings are consistent with epidemiological data showing higher rates of depression in poor young women and with data on prevalence rates of perinatal depression among women in the developing countries [14].

The importance of detecting and treating perinatal depression has only recently been recognized [15, 16]. Research indicates that depression during pregnancy, regardless of the type of antenatal depression measurement (i.e. categorical or continuous), is associated with modest but significant risks of preterm birth (PTB), and low birth weight (LBW) [14].

Podolska et al., suggested that women who showed signs of depression during pregnancy, experience and express themselves differently in terms of emotions, self-esteem and in their self-assessment of a number of their actual psychological needs [5].

Major depression is a distinct clinical syndrome for which treatment is clearly indicated, whereas the definition and management of minor depression are less clear. Perinatal depression encompasses major and minor depressive episodes that occur either during pregnancy or within the first 12 months postpartum [1]. Studies suggest that as many as 14.5 % of pregnant women have suffered from a new episode of major or minor depression during pregnancy, and 14.5 % have had a new episode during the first 3 months postpartum. Considering major depression alone, 7.5 % of the women may have a new episode during pregnancy and 6.5 % during the first 3 months after delivery [1]. However, perinatal depression, major or minor, often remains unrecognized because numerous discomforts of pregnancy and the puerperium are similar to depressive symptoms.

Mood disorders associated with nonpsychiatric severe medical conditions of mothers, such as systemic lupus erythematosus for example, may also be directionally entangled with pregnancy, acting as a reaction to a chronic disease or to the associated consequences (i.e. problems with maintaining pregnancy, fear of side effects of immunomodulatory or psychotropic drugs, etc.) [17].

Anxiety disorders

A wide range of anxiety disorders, including panic attacks, phobic anxiety, generalized anxiety, obsessive-compulsive disorder, dissociative (conversion) disorders, somatoform disorders, or adjustment reaction, may occur during pregnancy [18, 19]. They may affect the well-being of both, the mother and the fetus. Similarly to other mental disorders, anxiety disorders could increase the risk of perinatal complications such as pre-eclampsia, abnormal fetal circulation, early rupture of the amniotic sac, uterine dyskinesia, or Apgar score below 7. Although some studies claim that pregnancy itself may be a protective factor, shielding from panic attacks, other research suggests that improvement in anxiety disorders during pregnancy is observed in only 20% of the female patients, while in 54% no changes in the severity are noted and in another 20% the level of neurotic symptoms actually increases [1]. There is also a risk of the development of posttraumatic anxiety reactions in pregnant victims of rape or violence during pregnancy [20, 21]

Psychotic disorders

Psychotic relapse during pregnancy is rare, but women with a history of mood disorders (affective psychosis) are at a high risk of postpartum relapse. The potential consequences of an untreated psychotic episode may be severe and may lead to the mother attempting suicide and/or infanticide [22]. The studies of Kendell et al., identified new-onset psychotic episodes in 1/250 deliveries in south London and found the admission rate to psychiatric wards to be 1/500 deliveries in Edinburgh [23]. There was a wide range of diagnoses in the admitted women, with the rate of about 1/1000 deliveries as far as clearly psychotic diagnoses were concerned. However, it is probable that the proportion of the episodes of depression were psychotic and therefore it is likely that the rate was overestimated. A Danish register study involving more than a million deliveries indicated a similar admission rate of 0.99 for every 1000 deliveries in the first 3 months postpartum [24].

Numerous follow-up studies of severe puerperal episodes suggest that, although the prognosis for recovery from the initial episode is very good, women remain at risk of subsequent puerperal and non-puerperal episodes. Recurrence rates following subsequent pregnancies are 50% or more, and about 50% of the affected women have further non-puerperal episodes. Although the status of puerperal psychosis and its clinical boundaries remains subject to debate, the weight of the evidence supports a close link to bipolar illness and it is clear that women with a bipolar diathesis are at particularly high risk of episodes in the puerperium.

The onset of postpartum psychosis is usually acute within the first 2 weeks of delivery, and appears to be more common in women with a strong family history of bipolar or schizoaffective disorders [24].

Psychotic disorders may manifest for the first time during pregnancy or become more severe in their chronic form, with the estimated risk of only about 0.1-0.25% for the former but increasing to as much as 50% for the latter [25].

The symptoms are distressing and can also lead to harmful behaviors which include suicide, child neglect and abuse, or even in some extreme cases, to the most dangerous and extreme post-natal reaction: infanticide. Without treatment, the postnatal psychosis can persist for many months, but if women receive modern therapy, the symptoms usually resolve within a few weeks, reducing the risk of harm for both, the mother and the baby. Untreated psychosis in pregnancy may lead to various negative consequences that can be dangerous for the mother and the child - risky behaviors, neglecting daily self-care, etc. The risk of delivering a child with malformations is two times higher in untreated or improperly treated schizophrenic patients than in healthy women [25].

Eating disorders

Eating disorders are specifically focused on a woman's attitude towards motherhood, self-image and self-esteem [26, 27]. Pregnancy is an especially vulnerable and delicate time for both, the mother-to-be and the developing baby. Many women who struggle with an eating disorder may become pregnant either in an active stage of disease or during the recovery phase. Even if a woman has been in recovery from an eating disorder for a long period of time, pregnancy can still trigger old habits and behaviors, with new changes and symptoms typically experienced during this time. Pregorexia is a modern term used to describe the presence of anorexia-like symptoms in pregnant women. Women with the

disorder have an excessive fear of pregnancy-related weight gain and use various methods, including extreme exercise routines and calorie restriction, to avoid the weight increases that mark the course of a normal, healthy pregnancy. Potential consequences of these behaviors include pregnancy complications, premature childbirth and a variety of health conditions associated with an unusually low child birth weight [28].

Personality disorders

Personality disorders obviously do not develop due to pregnancy but are a result of many complex reasons exceeding the scope of this publication [27]. Some personality disorders, especially borderline personality, can affect the behavior of the pregnant woman, her family relationships, or collaboration with the medical staff. Pregnancy is often perceived by the mother with this disorder as an unwanted intrusion or, on the contrary, as the property of the woman. In such situations, intense feelings can lead to unforeseen impulsive behaviors, including aggressive and auto aggressive acts (e.g. suicide attempts, abortion attempts) [18]. Other personality disorders, such as anxious personality and dependent personality for example, may lead to distortions of cooperation with the medical staff rather than immediate serious threats to health [18, 19].

Conclusions

Treatment of mental disorders in pregnant women requires special attention and cooperation of ginecologists, psychiatrists, the affected individuals, as well as their partners, and the entire family.

Despite the fact that there are many treatment options, for example pharmacotherapy, light therapy, electroconvulsive therapy (ECT), the choice of the proper therapeutic method remains challenging due to the teratogenic effect of most psychoactive drugs and specific requirements to enter various psychotherapeutic programs.

Psychotherapy, unlike other forms of treatment, is not associated with high risk of unwanted side effects in both, the mother or the fetus. It can be a useful method, even if indications are limited to subclinical symptoms of mental disorders or they result merely from mother's plea for support.

A review of the current opinions of clinicians and researches concerning possibilities, indications and outcomes of psychological treatments as a way to help pregnant women who suffer from different psychiatric condition is the subject of our paper entitled *"Psychotherapy and counseling for pregnant women – reasons and limitations"*.

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1. Łukasz Müldner-Nieckowski – autor koncepcji i założeń pracy, przygotowanie manuskryptu i piśmiennictwa – autor zgłaszający i odpowiedzialny za manuskrypt.
2. Katarzyna Cyranka – przygotowanie piśmiennictwa, współautor tekstu pracy.
3. Bogna Smiatek-Mazgaj – współautor tekstu pracy.
4. Michał Mielimąka – współautor tekstu pracy.
5. Jerzy A. Sobański – współautor tekstu pracy, aktualizacja literatury.
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References

1. Gaynes BN, Gavin N, Meltzer-Brody S, [et al.]. Perinatal Depression: prevalence, screening accuracy, and screening outcomes. AHRQ Evidence Report/Technology Assessment No. 119. Agency for Healthcare Research and Quality; Rockville, MD: 2005.
2. Koch HJ, Bauer A. Osteogenesis imperfecta associated with recurrent depressive episodes and postpartum psychosis in a 27-year-old women. *Arch Psychiatry Psychother.* 2012, 14 (4), 59-62.
3. Lepiarz A. Zmiany psychiczne doświadczane przez kobiety oczekujące narodzin dziecka. *Gin Prakt.* 2010, 1, 54-57.
4. Sobański JA, Müldner-Nieckowski Ł, Klasa K, [et al.]. Objawy i problemy związane z seksualnością pacjentów dziennego oddziału leczenia zaburzeń nerwicowych. *Psychiatr Pol.* 2012, 46 (1), 21-34.
5. Krzyżanowska-Zbucka J. Problemy emocjonalne kobiet w okresie okołoporodowym. Fundacja Rodzić po Ludzku: Warszawa; 2008.
6. http://www.mindinstitute.com.pl/index.php/pl/psychologia-ciy/o-psychologii-ciy Julia Wahl 2009 accessed at 01.10.2013.
7. Makara-Studzińska M, Wdowiak A, Plewik I, [et al.]. Seksualność kobiet w ciąży *Seksuologia Pol.* 2011; 9(2): 85–90.
8. Brtnicka H, Weiss P, Zverina J. Human sexuality during pregnancy and the postpartum period. *Bratisl Lek Listy.* 2009. 110 (7), 427-431.
9. Radochoński M. Zarys psychopatologii dla pedagogów. Rzeszów: *Wyd. Naukowe WSP.* 1996.
10. Jankowiak B, Waszyńska K. Współczesne formy życia partnerskiego. Analiza jakości i trwałości relacji. *Nowiny Lek.* 2011, 80 (5), 358–366.
11. Müldner-Nieckowski Ł, Klasa K, Sobański JA, [et al.]. Seksualność studentów medycyny - rozwój i realizacja potrzeb seksualnych. *Psychiatr Pol.* 2012, 46 (1), 35-49.
12. Johnson CE. Sexual health during pregnancy and the postpartum. *J Sex Med.* 2011, 8 (5), 1267-1284.
13. Millheiser L. Female Sexual Function During Pregnancy and Postpartum. *J Sex Med.* 2012, 9 (2), 635–636.
14. Grote NK, Bridge JA, Gavin AR, [et al.]. A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Arch Gen Psychiatry.* 2010, 67 (10), 1012-1024.
15. Podolska MZ, Majkowicz M, Bidzan M, [et al.]. Ja realne i ja idealne u kobiet ciężarnych i położnic z objawami depresji okołoporodowej. *Psychiatr Pol.* 2013, 47 (1), 41-52.
16. Mojs E, Czarnecka-Iwańczuk M, Głowacka MD. Poziom lęku jako stanu i jako cechy oraz depresji we wczesnym połogu – doniesienie wstępne. *Psychiatr Pol.* 2013, 47 (1), 31-40.
17. Celińska-Löwenhoff M, Musiał J. Zaburzenia psychiczne w chorobach autoimmunologicznych – problemy diagnostyczno-terapeutyczne. *Psychiatr Pol.* 2012, 46 (6), 1029-1042.
18. Goodwin RD, Keyes K, Simuro N. Mental Disorders and Nicotine Dependence Among Pregnant Women in the United States. *Obstet Gynecol.* 2007, 109 (4), 875–883.
19. Uguz F, Gezginc K, Kayhan F, [et al.]. Is hyperemesis gravidarum associated with mood, anxiety and personality disorders: a case-control study. *Gen Hosp Psychiatry.* 2012, 34 (4), 398-402.
20. Mahenge B, Likindikoki S, Stöckl H, Mbwambo J. Intimate partner violence during pregnancy and associated mental health symptoms among pregnant women in Tanzania: a cross-sectional study. *BJOG.* 2013, 120 (8), 94094-6. *Epub* 2013 Mar 6.
21. de Haas S, van Berlo W, Bakker F, Vanwesenbeeck I. Prevalence and characteristics of sexual violence in the Netherlands, the risk of revictimization and pregnancy: results from a national population survey. *Violence Vict.* 2012, 27 (4), 592-608.
22. Sharma S, Sonawalla S, Parikh F, Parikh R. Psychiatric disorders associated with pregnancy Psychiatric disorders associated with pregnancy. *J Obstet Gynecol India.* 2005, 55 (3), 218-227.
23. Kendell RE,Chalmers JC, Platz C. Epidemiology of puerperal psychoses. *Br J Psychiatry.* 1987, 150, 662-673.
24. Terp IM, Mortensen PB. Post-partum psychoses. Clinical diagnoses and relative risk of admission after parturition. *Br J Psychiatry.* 1998, 172, 521–526.
25. Karakuła H, Szajer K, Pawęzka J, [et al.]. Psychofarmakoterapia zaburzeń psychotycznych w okresie ciąży i laktacji. *Psychiatr Pol.* 2005, 39 (2), 285-292.
26. Pilecki MW, Józefik B, Sałapa K. Związek oceny relacji rodzinnych z depresją u dziewcząt z różnymi typami zaburzeń odżywiania się. *Psychiatr Pol.* 2013, 47 (3), 385-395.
27. Mathieu J. What is pregorexia? *J Am Diet Assoc.* 2009, 109 (6), 976-979.
28. Grabski B, Gierowski JK. Zaburzenia osobowości – różne spojrzenia i próby ich integracji. *Psychiatr Pol.* 2012, 46 (5), 829-844.